Albrecht®
Kommunikationstechnik aus Norddeutschland

Albrecht AE 502

2 m Handheld Amateur Radio Transceiver

SPECIFICATIONS

General

Transmitter .... Crystal controlled PLL synthesizer, frequency modulation
Receiver .... Crystal controlled double conversion, superheterodyne system
Communicating frequencies range... 144.00-145.995MHz(5KHz, 10KHz, 15KHz, 20KHz, 12.5KHz, 25KHz step)
Operating voltage .... 6~14V DC (negative ground)
Temperature and humidity range .... -22°F ~ +140°F (-30℃ ~ +60℃) at 10% ~ 90% humidity
Transmitter/receiver switching .... Electrical

Standard Test Conditions

Power source .... 13.2 V DC
ANT load impedance .... 50 ohms, non-inductive
Audio output load impedance .... 16 ohms, non-inductive
Modulation .... 3KHz DEV
Reference audio output power .... 0.25 W
Test channel .... 145.500 CH
Test temperature and humidity range ...... -22°F ~ +73°F (17℃ ~ 23℃) at 40% ~ 70% humidity

Transmitter

Description	Unit	Normal	Limit
Frequency tolerance	%	±0.0005	±0.001
RF power output			
7.2V DC	W	2.2	2.0
10.8V DC	W	3.5	3.0
12V DC	W	4.0	3.5
13.8V DC	W	4.5	4.0
Maximum deviation	KHz	5	±1
Microphone sensitivity	mV	6	10
Audio frequency response (1 kHz 0 dB reference)			
450Hz	dB	+6/oct	+1/-3
2500Hz	dB	+6/oct	+6/Oct
Hum and noise	dB	42	40
Spurious emission	dB	70	60
CTCSS Tone deviation	KHz	0.7	0.5~1KHz
Current drain			
7.2V DC	A	0.8	0.9
10.8V DC	A	0.9	1
12V DC	A	1.0	1.1
13.8V DC	A	1.05	1.1
Lower power	A	0.46	0.6

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Receiver

Intermediate Frequency
1st IF = 21.4MHz
2nd IF = 455 kHz

Description	Unit	Normal	Limit
Maximum sensitivity 12dB SINAD	dB	-14	-12
Squelch sensitivity			
Threshold	dB	-20	-14
Tight	dB	-10	±6
Spurious Response Attenuation	dB	70	60
Intermodulation Attenuation	dB	60	54
Adjacent Channel Rejection(25KHz)	dB	65	60
Hum and Noise	dB	50	40
Distortion at 1 mV input, 3KHz modulation	%	3	10
Audio output power at 10% THD			
7.2V DC	W	0.3	0.25
10.8V DC	W	0.5	0.4
12V DC	W	1	0.7
Audio fidelity			
450 Hz	dB	-3	-3±6
2500 Hz	dB	-3	-3±6
Image rejection ratio (1st IF/2nd IF)	dB	65	60
IF rejection ratio (1st IF/2nd IF)	dB	65	60
S meter sensitivity at "9"	dB	10	±6
Current drain			
Stand-by without Power Save	mA	45	50
Stand-by Power Save	mA	30	35
Current drain at maximum signal	mA	200	250

Other Items

Fuse .... DC 2 Amp/ 32 Volts
Dimension (HxWxD) .... $2 \times 6^1/_{10} \times 7^2/_3$ Inchies (65 X 37 X 167 mm)
Weight .... 400g(W/EMPTY BATT PACK)

Note: Nominal specs represent the design specs. All units should be able to approximate these some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable; in no case should a unit fail to meet limit specs.

Albrecht AE 502 Amateur Transceiver
Frequenzbereichs-Optionen

PLEASE FIND THE MODIFICATION METHODE OF CHANGE MODE
AS FOLLOW. (IF YOU CHANGE BAND, THEN MUST RESUME RESET)

1. BAND MODE

MODE	SW 1	SW 2	DISCRIPTION	
1	L	L	RX / TX FULL·BAND:	136.00-173.9975MHz
2	H	L	RX:136.00-173.9975MHz,	TX:144.00-147.9975MHz
3	L	H	RX / TX:	144.00-145.9975MHz
4	H	H	RX:136.00-173.9975MHz,	TX:144.00-145.9975MHz

NOTE : H - SHORT
L - OPEN

2. RESET OF CPU
   A) TURN ON POWER SWITCH.
   B) KEEP FUNCTION SWITCH PRESSED (PRESS CONTINOUSLY)
   C) TURN OFF POWER SWITCH AND THEN ON AGAIN.
   D) RELEASE FUNCTION SWITCH.

3. PLEASE FIND A COPY OF FRONT PCB LAYOUT AND FIG.

